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ALBERTA'S OIL INDUSTRY -  
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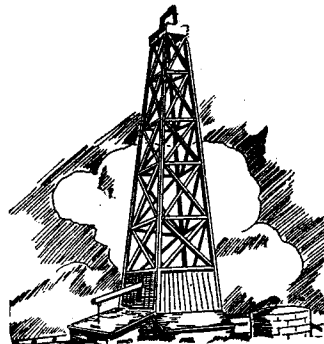
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# **ALBERTA'S OIL INDUSTRY**

**1943  
REVIEW**

By J. L. IRWIN



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# ALBERTA OIL IN 1943

By

J. L. IRWIN\*



THE year 1943 presented the Province of Alberta with her first decline in production of oil over a period of eight years. It was anticipated many months ago that some such announcement would have to be made at the end of the year. The 1943 total of 9,674,548 barrels resulted in a decrease of 461,748 barrels from the 1942 total of 10,136,296.

In spite of this fact, oil fields outside of Turner Valley increased their total production nearly 60% in 1943 with a total of 221,851 barrels in comparison with 139,335 for 1942. Outstanding in this respect were the performances of the Vermilion and Taber fields.

The reason for Alberta's production decrease last year may be given by stating briefly that oil recovered from successful completion of wells drilled in the proven zone of Turner Valley in 1943 was not heavy enough in volume to offset, and certainly not heavy enough in volume to surpass, the total decline of older wells in that particular area.

Another reason contributing

to Alberta's oil decline last year was the annual production total of the Taber field. Taber, coming extremely close to Vermilion, takes second place in the list which follows, showing the production of Alberta oil fields outside of Turner Valley. The Taber total of 88,735 barrels which is given, is, however, regarded as a smaller one, a very much smaller one, perhaps, than the total which might have been reached had it been possible to find a market for the entire output which the successfully completed wells of this field were capable of producing. A market only existed, however, for a percentage of this output—a situation which has continued for many months, and for which, at the time of this review, no solution of the problem has yet been found. Failure to produce at capacity naturally reacted unfavourably on the field's production total for the year.

Both Vermilion and Taber, as a matter of fact, produced under handicaps in 1943. Vermilion's problem was that the treating plant of the Vermilion

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Refinery Company at Borra-daile had been closed down during the first part of the year for the installation of new equipment. It reopened on May 18, 1943, following which monthly production figures

rose quickly from approximately 2,500 barrels during May to nearly 17,000 barrels during November, the major figures starting in June.

Annual production statements, as in previous Alberta Oil reviews, follow:

COMPARATIVE MONTHLY STATEMENT  
(Quantities in Barrels)

	1942	1943	Increase or Decrease	Daily Average 1942	1943
January .....	862,284	840,613	— 21,671	27,815	27,156
February .....	833,552	757,158	— 76,394	29,770	27,041
March .....	908,463	829,684	— 78,779	29,306	26,764
April .....	832,261	803,583	— 28,678	27,742	26,786
May .....	876,732	843,431	— 33,301	28,282	27,207
June .....	831,190	793,022	— 38,168	27,706	26,435
July .....	845,013	816,776	— 28,237	27,258	26,348
August .....	846,635	826,191	— 20,444	27,310	26,659
September .....	800,861	798,211	— 2,650	26,695	26,607
October .....	841,363	822,197	— 19,166	27,141	26,522
November .....	823,056	776,126	— 46,930	27,435	25,871
December .....	834,886	767,556	— 67,330	26,931	24,987
TOTALS .....	10,136,296	9,674,548	— 461,748	27,770	26,505

ANNUAL PRODUCTION  
(Quantities in Barrels)

1914-21 .....	56,675
1922 .....	15,796
1923 .....	10,003
1924 .....	17,749
1925 .....	180,885
1926 .....	219,598
1927 .....	332,312
1928 .....	489,532
1929 .....	999,523
1930 .....	1,436,259
1931 .....	1,454,816
1932 .....	918,154
1933 .....	1,012,784
1934 .....	1,266,049
1935 .....	1,263,968
1936 .....	1,320,428
1937 .....	2,796,874
1938 .....	6,743,101
1939 .....	7,593,492
1940 .....	8,495,207
1941 .....	9,908,643
1942 .....	10,136,296
1943 .....	9,674,548
TOTALS .....	66,342,692

Alberta Oil Wells Outside  
Of Turner Valley.

A glance at the following table, covering period of the last two years, will give production data for oil fields outside of Turner Valley:

NOTE—The above are revised production tables, in comparison with those published in previous years. Revisions in yearly totals, now made necessary by the receipt of additional data, include for 1942 a deduction of 6,974 barrels for storage loss at Vermilion.

**PRODUCTION FROM ALBERTA FIELDS OUTSIDE TURNER VALLEY**  
(Quantities in Barrels)

Field	1942	1943	Increase or Decrease
Taber .....	29,819	88,735	+58,916
Vermilion .....	63,793	93,258	+29,465
Wainwright .....	14,510	18,136	+ 3,626
Red Coulee .....	10,107	8,928	- 1,179
Princess .....	10,478	340	-10,138
Tilley .....	5,718	5,065	- 653
Dina .....	2,780	200	- 2,580
Del Bonita .....	1,653	1,882	+ 229
Lloydminster .....	477	2,640	+ 2,163
Moose Dome .....	.....	2,205	+ 2,205
Armeigra .....	.....	462	+ 462
<b>TOTALS .....</b>	<b>139,335</b>	<b>221,851</b>	<b>+82,516</b>

The increase of 82,516 barrels, in consideration of the difficulties already touched upon, encountered at both Vermilion and Taber last year, is definitely encouraging. Much is hoped for as to the productive total to be secured from these two fields during the current year.

Prospects are much brighter in 1944 for Vermilion. The plant, often running close to capacity, is to be now helped in treatment by the new electrical process used elsewhere for oil of this classification. With a 22-cent increase for the product, with removal of past fears as to plant capacity, and with speedy drilling to shallow horizons, it looks as if the 1944 production total should be something really worth while. To indicate just what the treatment plant meant to Vermilion's production last year, the following figures are given as an illustration:

Vermilion Oil Production in 1943:— January, 1,094 barrels; May, 2,481 barrels; June (plant reopened), 6,092 barrels; November, 16,880 barrels.

The Taber field on present data would appear to have the brightest prospects of any area

now being explored in Alberta. The discovery well has been in production for eighteen months and at the present time is still producing a little less than 200 barrels per day of clean 18.4° A.P.I. crude. Total production of this well to date is approximately 80,000 barrels. Five other wells are also either on production or being placed on same with capacities varying from 30 to 350 barrels per day. One string of tools is at present kept in operation in the field, which is now able to produce, on present capacity, in excess of 1,000 barrels of clean 18.4° gravity crude per day.

The Ram River area offered additional good news towards the close of the year by completing a new road to its No. 3 well location. No. 2, it will be remembered, finished drilling at 4,340 feet. No production data is available as yet. The company reports a 41.5° crude with low sulphur content at 0.136%. Analysis of the crude was made by Mr. M. Van Winkle of the University of Michigan, under the supervision of Dr. Grainger Brown, and product analyzed was recovered from the 4,250-ft. to 4,325-ft. depth.

A 94-ft. steel derrick is to be used for No. 3, which will drill a larger diameter hole, with drilling higher in the structure. The further development of this new field in the Foothills will be watched with interest.

The improved situation at Lloydminster is an encouraging feature of the year. In watching the progress made in this field, and in other areas where speedy production is obtained from shallow horizons, it is well to remember that the average production of an oil well in the United States is eight barrels per day, and that this country for many years has produced over 60% of the world's oil. A great number of steadily producing small wells will make an impressive production total.

Wartime Oils Limited, financed by the Dominion Government during the latter part of 1943, is drilling in the proven zone of Turner Valley on the central west flank. Large, individual production, equal to that of the northern end of the field, cannot be looked for from this area, though production from each well is anticipated. As the first Wartime Oils well -- Okalta No. 12 -- was only completed on November 27, no help could be looked for from this source to increase the Province's 1943 total.

A considerable effort was made during 1943 with a view to exploring new oil areas. In this connection, 3,978,557 acres under the new regulations were granted for the purpose of geological and geophysical examination.

## **Conservation Board.**

Since publication of the last review, the resignation of Mr. J. J. Frawley, K.C., Chairman of the Petroleum and Natural Gas Conservation Board, has taken place. The present personnel of the Board is as follows: Dr. E. H. Boomer, Professor of Chemistry of the University of Alberta, is the Chairman; Mr. G. W. Northfield, Deputy Chairman, and Mr. M. D. Kemp, Member.

## **Bituminous Sands.**

No production figures materialized in 1943 regarding development of the bituminous sands area of Northern Alberta.

The Abasand plant was undergoing reconstruction during the year, with expectations of resuming the productive stage in the early part of 1944. The reorganization, details of which have been widely published, is being financed by the Dominion Government.

Twenty miles down the Athabaska River at Steepbank, core drilling of the outcrop was carried out in 1943 under the supervision of the Department of Mines and Resources, and samples from test wells were submitted to Ottawa at regular intervals for analysis.

At Bitumont, fifty miles down the river from McMurray, the plant of Oil Sands, Limited, formerly the International Bitumen, Limited, opened once again after being shut down for five years. Reorganization was entered upon, but no production of by-products was reported during the year.

**CANADIAN OIL PRODUCTION**  
(Quantities in Barrels)

	1942	1943	Increase or Decrease
Alberta .....	10,136,296	9,674,548	—461,748
New Brunswick .....	28,089	25,000 (a)	— 3,089 (a)
Ontario .....	143,845	133,000 (a)	— 10,845 (a)
N.W. Territories ....	75,789	(b)	— 75,789 (a)
<b>TOTALS .....</b>	<b>10,384,019</b>	<b>9,832,548 (a)</b>	<b>—551,471 (a)</b>

(a)—Preliminary figures.

(b)—Data not available for publication.

It will be noted from the above that the first three oil sections of Canada all show decreases. For the fourth, the Northwest Territories, there can be no question of decrease as production for the first half of 1943 has long since been reported to be greater than the

whole of 1942. It is simply that the yearly figures for 1943 are not available and must, therefore, be shown as a blank. The above total for Canada, therefore, cannot be accepted as a true one.

**BRITISH EMPIRE PRODUCTION**  
(Quantities in Barrels)

Country	1942	1943 (a)	Increases or Decreases (a)
Trinidad .....	21,500,000	22,000,000	+ 500,000
Canada .....	10,384,019	9,832,548	— 551,471
Bahrein Island .....	7,250,000	7,300,000	+ 50,000
Burma .....	2,500,000	.....	—2,500,000
Brunei .....	.....	.....	.....
India .....	2,500,000	2,600,000	+ 100,000
Sarawak .....	.....	.....	.....
<b>TOTALS .....</b>	<b>44,134,019</b>	<b>41,732,548</b>	<b>—2,401,471</b>

(a)—Preliminary figures.

Burma has been added now to the names of Brunei and Sarawak as minus quantities regarding British Empire oil production, leaving only the countries of Trinidad, Canada, Bahrein Island and India as active. It will be noticed from the above that few changes have taken place in the active areas of the Empire.

**World Crude Oil In 1943.**

World crude oil production reached its highest peak in history in 1943, with an estimated total of 2,256,635,000

barrels, an increase of 202,664,000 over 1942.

The revival of transportation, both marine and pipe-line, was the cause of the big increase. Sea lanes were cleared of enemy submarines, new tankers were built and new pipe-lines laid.

Principal increases were as follows: United States, 123,000,000 barrels; Venezuela, 32,000,000; Russia, 23,000,000; Iraq, 13,000,000, and Netherlands East Indies, 9,000,000. The last named area is, of



course, in enemy hands at present. Russia's victories in the Caucasus and Stalingrad are accountable for that country's increase, and the re-opening of the northern leg of the pipeline to the Mediterranean, early in 1943, gave Iraq its big advance. A still further world increase is looked for during the current year, according to some observers.

British Empire percentage of world production in 1943 dropped to 1.85, the lowest since 1935. The elimination of Burma, Brunei and Sarawak—always good for an annual total of 15,000,000 barrels in days of peace—is the obvious reason. Canada's decrease of half a

million barrels, preliminary figures, was not large enough, of course, to make much difference.

Alberta is given a 99 percentage of Canada's oil production in 1943, due to the Northwest Territories' total not being needless to say, is also a pre-available for publication. This, liminary figure.

The new year of 1944 is expected to witness big things happening in oil production throughout the world. It is hoped that Canada will play a noticeable part in this advance, and that Alberta, as in former years, will lead the way. It will, for many reasons, be an interesting year to watch.

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